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## PUZZLE GAME APPARATUS AND METHOD OF PLAY

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### FIELD OF THE INVENTION

The present invention pertains to the field of games and in particular to puzzle-type games.

### BACKGROUND

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The construction of puzzles is a very popular past time for a large number of people. Puzzles challenge a person's problem solving skills in addition to their patience in some cases. In some instances puzzle construction may help with the improvement of motor skills of an individual, in addition to focusing and concentration skills.

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There are a number of games which integrate the construction of a puzzle and a board game together. For example, United States Patent No. 5,301,953 describes a game which requires the placement of geometric shapes onto a game board in order to completely cover the designated area. Chance devices are used to determine which geometric  
20 shapes are to be used for completion of the puzzle. In this game each puzzle piece is not assigned a predetermined position within the puzzle enabling its completion and therefore a selected puzzle piece may be placed anywhere within the designated area.

In addition, United States Patent No. 5,071,132 describes a molecular structure game for  
25 creating chemical compounds which are taken from playing cards that are played out by using element hexagon-shaped marker pieces on four pyramid-like areas of connecting multi-hexagon spaces on a game board. The elements are chosen by moving playing pieces along a continuous path around the game board perimeter. This game however, is

not suited for younger players due to the subject matter to which it relates and additionally involves a number of components including game cards and point collecting for winning the game.

- 5 A game apparatus which relates to an election game is described in United States Patent No. 5,190,293. The game apparatus includes a game board formed with a perimeter of spaces to include a central space having a puzzle configuration representative of a United States map, with each of the states inter-fitting relative to the puzzle. Individual players are directed about the game board path, and upon landing on various spaces are  
10 directed to elect various mayoral representative figures for each state, with each state being provided with a predetermined number of mayoral representatives. A player with a greatest number of mayoral representatives in a certain state is directed to effect control of the election of governor and subsequently, control of the state's electoral votes for subsequent voting of a president, with each player representing a different political  
15 party. Dice members and a dice member agitation device is arranged for use by the invention. This game incorporates the concept of a board game with the creation of a puzzle, however the game further comprises a number of additional components including multiple pieces for a particular position within the central space as well as playing cards. Based on the subject matter of the game, it is not necessarily suited to all  
20 age groups.

- United States Patent No. 5,009,430 describes a game for teaching the skills of geography and history utilising a map of the major continents of the world having indicia representing the profiles of topographical or political boundaries of countries. Playing  
25 pieces are provided for one to four players which match the topographical or political boundaries of the countries and indicia on each of the playing pieces identifies the countries. The playing pieces defining the various countries are placed in matching registry with the indicia representing the topographical or political boundaries of the countries on the map. Game markers are provided for the players and a series of blocks  
30 surround the map, indicia on the blocks comprise secondary directions for movement of the game pieces, the primary directions for movement of the game pieces being originated by a die or other chance indicator actuated progressively by the players. Again, based on the subject matter of the game, it is not necessarily suited to all age groups.

Therefore there is a need for a new puzzle game which may be played by a wide range of player skills and ages and incorporates a minimal number of different components thereby possibly being easier and cheaper to manufacture.

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This background information is provided for the purpose of making known information believed by the applicant to be of possible relevance to the present invention. No admission is necessarily intended, nor should be construed, that any of the preceding information constitutes prior art against the present invention.

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### SUMMARY OF THE INVENTION

An object of the present invention is to provide a puzzle game apparatus and method of play. In accordance with an aspect of the present invention, there is provided a puzzle game apparatus comprising: a game board including: a plurality of task indicia identified thereon arranged in a path formation, wherein an action is associated with at least one task indicia, the action being performed during play of the game; a puzzle creation  
15 region integrally part of the game board, the puzzle creation region having a perimeter and the perimeter having a number of attachment means for interconnecting and retaining a number of playing pieces. The game apparatus further comprises a plurality of playing pieces each having a number of connection means for interconnection  
20 between playing pieces and each playing piece has a predetermined position within the puzzle creation region, wherein predetermined playing pieces interconnect with the attachment means associated with the perimeter of the puzzle creation region.

In accordance with another aspect of the invention, there is provided a method of  
25 playing a puzzle construction game comprising the steps of: providing a game board comprising a plurality of task indicia thereon in a path formation and a puzzle creation region having associated attachment means; providing a plurality of playing pieces each of which has a predetermined position within the puzzle creation region; moving a player identifier along the path formation, thereby selecting a task indicia; performing an  
30 action associated with the selected task indicia; placing a playing piece within the puzzle creation region, wherein a playing piece may only be placed within the puzzle creation region if it interconnects with either another playing piece or the attachment means of the puzzle creation region; performing steps of (i) moving a player identifier, (ii)

performing an action and (iii) placing a playing piece, sequentially by each player following a predetermined order until a specified event occurs; and determining a winner based on a predetermined criteria.

### **BRIEF DESCRIPTION OF THE FIGURES**

- 5     Figure 1 illustrates a plan view of the game board according to one embodiment of the invention.

Figure 2 illustrates a playing piece according to one embodiment of the invention.

- 10    Figure 3 illustrates a plan view of a game board according to one embodiment of the invention wherein all of the playing pieces have been placed in their predetermined positions.

- 15    Figure 4 illustrates a plan view of a game board according to a further embodiment of the invention.

Figure 5 illustrates a plan view of a game board as it may appear during play of the game, according to one embodiment of the invention.

- 20    Figure 6 illustrates a plan view of a game board with thematic images represented thereon according to one embodiment of the present invention.

### **DETAILED DESCRIPTION OF THE INVENTION**

#### *Definitions*

- 25    The term "task indicia" is used to define an indicator on the game board which may have an action associated therewith, wherein actions are performed by players during play of the game.

The term "playing piece" is used to define the pieces of the puzzle being constructed during play of the game.

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The term "puzzle creation region" is used to define the area of the game board in which the puzzle is to be constructed during play of the game.

5 The term "communal area" is used to define the region in which the playing pieces are located, prior to selection by a player. At the commencement of the game all of the playing pieces are located in the communal area.

10 The term "individual area" is used to define the region assigned to a particular player, wherein any playing piece in the possession of a particular player is placed in their assigned individual area during play of the game. Each player is assigned an individual area prior to commencement of the game.

15 The term "active player" is used to define the player that may be performing actions as designated by the task indicia and/or attempting to place playing pieces in the puzzle creation region.

The term "player identifier" is used to define the object which is assigned to a particular player and which is moved along the path formation during play of the game.

20 Unless defined otherwise, all technical and scientific terms used herein have the same meaning as commonly understood by one of ordinary skill in the art to which this invention belongs.

25 The present invention provides a puzzle game apparatus and method of play, wherein the game involves the construction of a jig-saw type puzzle. The game apparatus comprises a game board having a number of task indicia identified thereon which are arranged in a path formation. These task indicia may provide actions by which a player may acquire or relinquish playing pieces. The game board additionally includes a puzzle creation region which is integrally part of the game board. The perimeter of the puzzle  
30 creation region has a number of attachment mechanisms by which playing pieces are connected thereto. Each playing piece has a predetermined position within the puzzle creation region and has associated with it connection mechanisms which mate with adjacent playing pieces and/or the attachment mechanisms associated with the perimeter of the puzzle creation region.

During play, a player moves their player identifier along the path formation acquiring or relinquishing playing pieces as indicated by the task indicia. Upon the acquisition of at least one playing piece, a player attempts to identify the predetermined location of a playing piece in their possession and subsequently places the playing piece into its assigned position.

In one embodiment of the invention, the puzzle game can be associated with a particular theme and images which can be associated with the game board and the playing pieces can determine the theme of the game. For example the theme may be related to a Formula 1 race and therefore the images on the game board may entail a track, race cars and a checker flag. Upon the completion of the puzzle within the puzzle creation region a large picture of a race car may be displayed, and as such each playing piece has a small portion of this image displayed thereon. Other themes may be associated with the puzzle game of the present invention, for example cartoon characters, television shows, movies, toys in a storage box, an alphabet, endangered animals or any other theme as would be known to a worker skilled in the art.

In a further embodiment of the invention, the image being created by the construction of the puzzle in the puzzle creation region, may be selected prior to commencement of the game. For example, the same game board may be associated with more than one set of playing pieces for the creation of the puzzle in the puzzle creation region. In this case, each set of playing pieces may form a particular image that may be pre-selected prior to play. In this manner, the interest of a player may be maintained for a plurality of games since the image associated with the game board and hence constructed during play, may be changed.

In one embodiment, during the manufacture of the game board and the playing pieces, all of these items may be "cut" from a single piece of material since the playing pieces form an integral portion of the game board upon their interconnection thereto. This method of manufacturing may result in the minimisation of the costs associated with the fabrication of the game components. The game board and playing pieces may be manufactured using for example, a single piece of semi-rigid paper or plastic, wood or any other type of material as would be known to a worker skilled in the art of game

board manufacture. The selection of the material may be determined based on cost or durability, for example.

5 The game apparatus comprises a game board and a plurality of playing pieces, each of which are further defined with reference to the accompanying figures. The game apparatus further comprises a random determination device which enables the random movement of a player identifier along the path formation.

### *Game Board*

10 As illustrated in Figure 1, the game board 10 comprises a number of task indicia 20 arranged in a path formation. These task indicia 20 may provide actions by which a player may obtain or relinquish the possession of playing pieces. The game board further comprises a puzzle creation region 30 which is integrally part of the game board and provides an area in which the puzzle may be created during play of the game. The puzzle creation region 30 has a perimeter which has associated with it a number of  
15 attachment means 40 which provide for the interconnection with playing pieces. For example, Figure 3 illustrates the game board wherein the puzzle within the puzzle creation region has been completed using the playing pieces.

20 In one embodiment of the invention, the game board may be formed in any number of shapes, for example, square, rectangle, circle, trapezoid, ellipse or any other shape as would be known to a worker skilled in the art. For example, a game board having a circular shape, wherein the puzzle creation region is additionally circular is illustrated in Figure 4. Additionally, a circular puzzle creation region may be subdivided into any number of sections, using division indicators 50, as shown in Figure 4.

25 In one embodiment, at the commencement of play of the game, all of the playing pieces are placed in a communal area removed from the puzzle creation region for random selection by the players. The task indicia provide a series of actions by which a player may obtain or loose possession of playing pieces. Playing pieces within the possession  
30 of a particular player are placed in their respective individual area. For example a task indicia may indicate that a player is to "Take 2" playing pieces. In this case, a player may optionally take pieces from the communal area or a player may take playing pieces

from an opponent's individual area or a combination thereof, such that a total of two playing pieces is taken. Alternate actions indicated by the task indicia may be "Return" or "Give" which may be equivalent to a player returning a designated number of playing pieces to the communal area, or giving a designated number of playing pieces to an opponent, respectively. The actions which are defined by the task indicia may additionally be any other action by which playing pieces may potentially be moved amongst the players, wherein these actions may be dependent on the number of players playing the game. For example an additional action may involve passing a playing piece to the player on your right. Optionally, an action may change the movement of the player identifier along the path formation, for example, moving a player identifier back a randomly selected or a predetermined number of positions (i.e. "Go Back 1 Roll") or changing the direction of movement of the player identifier along the path formation. A worker skilled in the art of games would understand various other methods by which playing pieces may be obtained or relinquished during play. In one embodiment of the invention, a task indicia may not have an action associated with it, for example, as shown in Figure 1, the blank circle task indicia does not have an action associated therewith.

The task indicia are arranged in a path formation, which provides a predetermined sequence of actions by which playing pieces may be obtained or relinquished. In one embodiment a player identifier can be randomly moved along the path through the use of a random determination device, for example a die or a spin wheel. In this manner a player may 'skip' some of the task indicia as they move their player identifier along the path formation.

The game board further comprises a puzzle creation region which is integrally part of the game board and defines a region in which the puzzle will be constructed during play of the game. The puzzle creation region can be any shape for example, rectangular, circular, trapezoidal or any other shape. The puzzle creation region has a perimeter which has associated with it a number of attachment means which provide for the interconnection of the playing pieces having mating connections. The attachment means associated with the puzzle creation region may be in any number of forms for example, a dovetail formation, typical jig-saw puzzle connections, or any other means as would be known to a worker skilled in the art.



In one embodiment of the invention, a player must be the first to complete their assigned portion of the puzzle within the puzzle creation-region in order to win the game. Division indicators 50 identifying the separation of the puzzle into sections may be displayed on the game board as shown in Figure 1. The puzzle creation region and hence the completed puzzle may be divided into any number of portions depending on the number of players for example, two, four, six or eight sections. In one embodiment the puzzle creation area is divided into sections such that each section contains an equal length of the perimeter of the puzzle creation region. This type of scenario can be provided by dividing a rectangular puzzle creation region into two or four sections, for example. As would be known to a worker skilled in the art, different shapes of the puzzle creation region provide for a different number of subdivisions while still maintaining an equal portion of the perimeter of the region within each subdivision. For example, with reference to Figure 4, the circular puzzle creation region is subdivided into three regions. In an alternate embodiment, the portion of the perimeter of the region assigned to any particular player can be assigned such that it comprises attachment means enabling the interconnection of the same number of playing pieces thereto. For example, each portion of the perimeter allows for the interconnection of 2, 3 or four playing pieces thereto. In addition, a playing piece may be required to complete two or more subdivisions of a puzzle, as shown in Figure 4.

In one embodiment of the invention, the game board may be formed from a number of segments which are assembled prior to play of the game. For example, the board can be formed from four components which are interlocked together to form the game board. In this manner, the plan area of the dismantled game board will be reduced for ease of storage, for example. Optionally the game board may be folded, however the folding of the game board may result in problems during play of the game, since attachment means associated with the perimeter of the game board may be adversely affected by the folding of the board.

In a further embodiment of the invention the game board may be fabricated in a small size which may be more appropriate for travel. With the reduction of the game board plan size, the puzzle creation region will reduce in area also. Therefore, the playing pieces may be reduced in size or reduced in number or a combination thereof in order to

be compatible with the relative size of the puzzle creation region of the smaller sized game board.

### *Playing Pieces*

The game apparatus further comprises a number of playing pieces which mesh with each other and with the attachment means associated with the perimeter of the puzzle creation region of the game board. Figure 2 illustrates a playing piece 60 having connection means 70, which provide a means for the meshing or mating of the playing pieces with each other and/or the perimeter of the puzzle creation region. The connection means 70, associated with the playing pieces may take a number of forms, for example a dovetail formation, a standard jig-saw type configuration or any other configuration as would be known to a worker skilled in the art. Figure 2 shows rectangular type playing pieces, however the shape of the playing pieces may equally well be circular, trapezoidal, letter shapes or random shapes, for example.

In one embodiment of the invention the playing pieces may be manufactured using a number of sizes. In this manner, the playing pieces associated with one particular puzzle may be of similar size or a mix of substantially different sized playing pieces. This type of varying playing piece size may enhance the enjoyment of the game as well as possibly changing the difficulty of the game. In another embodiment of the invention, all of the playing pieces are formed as similar sized pieces, wherein larger pieces may decrease the difficulty and length of the game for example and vice versa. Additionally, if the playing pieces are larger, the game may be more appropriate for use by younger children who are learning motor skills and hand eye coordination. Furthermore, a game according to the present invention incorporating larger pieces may be useful for the improvement of similar skills of adults who have suffered from accident or illness, for example.

Each of the game pieces has a predetermined position within the puzzle creation region and therefore the connection means associated with a particular playing piece must mate with adjacent playing pieces and in some instances, the connection means of a playing piece must mate with the attachment means associated with a portion of the perimeter of the puzzle creation region.

In one embodiment of the invention, each playing piece may have a unique portion of an image thereon, thus upon the completion of the puzzle within the puzzle creation region the completed image may be viewed. In this manner the connection means associated with each playing piece may be similar for ease of manufacture, for example, since the completed image determines the appropriate location of a playing piece within the puzzle creation region.

In an alternate embodiment of the invention, each playing piece may have a similar image thereon and the form of the connection means associated with a playing piece determines its appropriate location within the puzzle. This type of scenario may increase the difficulty associated with the construction of the puzzle during play of the game. Optionally a combination of varying images and connection means may be associated with the playing pieces.

#### 15 *Random Determination Device*

The game apparatus further comprises a random determination device which provides for the movement of a player identifier along the path formation and enables the determination of a task indicia for a particular turn of a player. A device which may operate in this fashion may be a dice, spinning selection device or any other means as would be known to a worker skilled in the art. For example, a spinning selection device may have a number of colours associated with it and by spinning a selection arrow a colour is randomly determined. Each of the task indicia can be associated with a particular colour and thus upon the selection of a colour using the spinning selection device the player identifier of the active player moves to the next task indicia along the path formation having a matching colour, for example. Other methods of randomly determining movement of a player identifier along the path formation would be known to a worker skilled in the art.

In one embodiment of the invention, the random determination device may additionally comprise an identifier which results in the change in the direction of the movement of a player's identifier along the path formation.

In one embodiment of the invention, the puzzle being created within the puzzle creation region during play may be a 3-dimensional puzzle. A worker skilled in the art would understand how to manufacture and design this type of puzzle.

#### *Method of Play*

- 5 Prior to commencement of the game all of the playing pieces are placed in the communal area in a manner such that the image displayed on each of the playing pieces is not visible to the players and the game board is placed in the full view of all the players. Each player is assigned, randomly, a portion of the puzzle to be completed during play and subsequently each player places their respective player identifier at a  
10 designated starting location on the game board. The player to commence play can be determined randomly using for example the roll of a die or other means as would be known to a worker skilled in the art. The order of play proceeds, for example, in a clockwise manner commencing with player one, as selected previously.
- 15 The active player uses the random determination device in order to establish the movement of their player identifier along the path formation, thereby determining a task indicia and a possible related action to be performed for this turn. In one embodiment of the invention, movement of a player's identifier may commence in a clockwise direction along the path formation or alternately in a counter-clockwise direction. In addition, this  
20 direction of movement may be amended during play of the game.

- Upon the determination of the task indicia and a possible related action for their turn by movement of their player identifier along the path formation, the active player performs the action and subsequently attempts to place a playing piece in their possession within  
25 the puzzle creation region. These events may alternately be performed in the opposite sequence wherein the player attempts to place a playing piece within the puzzle creation region prior to performing the designated action. The sequence in which these events are performed may affect the possibility of a player being able to place a playing piece within the puzzle creation region. For example, if the action requires the relinquishing  
30 of one or more playing pieces within their possession, (in the active player's individual area) there may not be a playing piece left in their individual area for insertion into the puzzle creation region.

Upon the completion of the active player's turn, the subsequent player randomly moves their player identifier along the path formation, thereby determining a task indicia and possibly a related action to be performed. The new active player proceeds to perform the determined action and subsequently attempts to place a playing piece within the puzzle creation region, or vice versa. The active player sequentially changes as  
5 previously determined until one of the players wins the game by, for example, being the first to complete their designated portion of the puzzle.

A task indicia may or may not have an affiliated action therewith. Actions may  
10 comprise, for example taking one or more playing pieces from an opponent's individual area or the communal area, returning playing pieces to the communal area or giving playing pieces to an opponent or any combination thereof. Additional actions may involve, for example the removal of a placed playing piece from an opponents portion of the puzzle or the removal of a placed playing piece of the active player's portion of the  
15 puzzle. In this example, these removed pieces may be returned to the communal area. A worker skilled in the art would understand that a number of other actions may be associated with a task indicia.

In order for a playing piece to be placed within the puzzle creation region, the playing  
20 piece must interconnect with either the attachment means associated with the perimeter of the puzzle creation region or the connection means associated with a playing piece previously placed within the puzzle creation region. Therefore all pieces within the puzzle creation region are fixed in their respective position. Figure 5 illustrates an example of the game board having a number of playing pieces interconnected, as may  
25 occur during play of the game.

In one embodiment of the invention, a player's goal is to be the first to complete a predetermined section of the puzzle within the puzzle creation region thereby winning the game. Alternately, in order to win the game a player may have to place the largest  
30 number of playing pieces within the puzzle creation region to win.

In one embodiment, there may be variations in the method of play regarding the placement of playing pieces within the puzzle creation region. For example, during a turn, the active player may be provided the opportunity to place as many playing pieces

within their possession into the puzzle creation region as possible. Additionally, a player may be provided with an additional chance to move their player identifier along the path formation during the same turn if they have been successful in the placement of a playing piece within the puzzle creation region. A worker skilled in the art would  
5 understand a number of other variations to the game according to the present invention.

In one embodiment, there may be a variation in the level of difficulty of the game. For example, if the puzzle, upon completion, has a large image depicted thereon, reference to a picture of the completed puzzle may provide guidance to a player for the placement  
10 of playing pieces during play of the game, thereby possibly making the game easier. Alternatively, the player may not be presented with a picture of the complete puzzle for assistance thereby possibly making the game more difficult.

In one embodiment a timing device may be used in order to limit the time provided for a  
15 player to attempt to place a playing piece within the puzzle creation region. In this manner the speed of the game may be increased and/or the difficulty of the game may be adjusted. For example, if the time provided for the placement of a playing piece is short, a player may have more difficulty identifying a playing piece that may be placed within the puzzle creation region.

20 In one embodiment of the invention, the game may be used to improve the hand eye co-ordination of a player, in addition to basic motor, focussing and concentration skills. In this manner a game according to the present invention, may be an entertaining way by which these types of skills can be developed, improved and/or rehabilitated.

## 25 EXAMPLE

Figure 6 illustrates an example of a game board with all of the playing pieces interconnected within the puzzle creation region. In this example, the theme relates to the placement of toys into a bin which is defined by the central image to be constructed during play of the game. Each of the toys within the bin is presented on the game board  
30 intertwining the path formation.

In this example, a possibility of at least three levels of difficulty of play may be envisioned. The players being provided with a representation of the completed image,

thereby identifying the location of each of the playing pieces within the puzzle creation region may be considered the easiest level of play. Alternately, a more difficult level of play may be envisioned if the completed image is not known, however a list of articles within a particular player's assigned portion of the puzzle is provided. This may assist a  
5 player with the selection of playing pieces during play. And the most difficult level can involve no references to the image or articles within the image at all.

The invention being thus described, it will be obvious that the same may be varied in many ways. Such variations are not to be regarded as a departure from the spirit and  
10 scope of the invention, and all such modifications as would be obvious to one skilled in the art are intended to be included within the scope of the following claims.